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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,218	09/12/2003	Harry Bims	1875.7300001	7178

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EXAMINER	
HSU, ALPUS	
ART UNIT	**PAPER NUMBER**
2465	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/661,218	BIMS ET AL.	
	Examiner	Art Unit	
	Alpus H. Hsu	2465	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 September 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9,10,26,27,29,30 and 41-46* is/are pending in the application.

4a) Of the above claim(s) *29 and 30* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *9, 10, 26, 27, 41-46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. Applicant's election without traverse of Group I, claims 9, 10, 26, 27, 41-46 in the reply filed on September 4, 2009 is acknowledged. The applicant is advised to cancel non-elected group of claims 29 and 30 in next response to expedite the prosecution of the instant application.

2. Claims 9, 10, 27, 41-46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 9, lines 8-9, it is unclear as to where the VLAN configuration information is coming from and in what format it is transmitted. Line 9, "the repeater" has no clear antecedent.

In claim 10, line 1, the word "independent" should be deleted from the claim. Lines 3-4, it is confusing for reciting the phrase of "to enable the repeater to operate". Is it referring to the activation of the repeater as in claim 9, lines 6-7?

Claims 41-45 are rejected for depending on claim 9.

In claim 46, line 2, "each traffic criteria" lacks antecedent basis.

In claim 27, line 3, "a heartbeat, beacon, and/or data messages" should be changed to -- a heartbeat, a beacon, and data messages -- for consistency in claim language.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 26 is rejected under 35 U.S.C. 102(e) as being anticipated by Varghese et al. in U.S. Patent No. 5,963,556 (of record), hereinafter referred to as Varghese.

For claim 26, Varghese discloses a method, comprising: determining at a repeater that a connection between the repeater and a switch is down, based on at least one of a heartbeat, a beacon, and data messages received or not from the switch (see col. 5, lines 41-44, wherein it is determined if the connection between the bridge and router is down when not hearing a hello message, with the two devices communicate through periodic hello messages); and in response to the determination, performing a reset process within the repeater that enables the repeater to reestablish a new connection with the switch (see col. 13, lines 25-27, wherein the link between the bridge and router is reset) wherein the reset process further comprises: listening at the repeater all messages broadcasted over a network (see col. 13, lines 39-40, wherein the bridge receives hello messages from the router); identifying at least one message that is associated with the switch (see col. 13, lines 39-40, wherein the bridge receives hello messages from the router), the message associated with the switch including a VLAN ID identifying the switch (see col. 13, lines 48-55, wherein the router sends VLAN ID information to the bridge); and establishing connection with the switch using the VLAN ID (see col. 14, lines 9-11, wherein a connection is formed between bridge 152 and router 150).

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Varghese in view of Ichikawa in U.S. Patent No. 6,307,837 (of record), hereinafter referred to as Ichikawa.

For claim 27, Varghese discloses a method, comprising: determining at a repeater that a connection between the repeater and a switch is down, based on at least one of a heartbeat, beacon, and/or data messages received or not from the switch (see col. 5, lines 41-44, wherein it is determined if the connection between the bridge and router is down when not hearing a hello message, and the two devices communicate through periodic hello messages); and in response to the determination, performing a reset process within the repeater that enables the repeater to reestablish a new connection with the switch (see col. 13, lines 25-27, wherein the link between the bridge and router is reset) wherein the reset process comprises: receiving VLAN (virtual local area network) configuration information from the switch (see col. 13, lines 39-40, wherein the bridge receives hello messages from the router); downloading operating software from the

switch to launch an operating environment of the repeater (see col. 6, lines 48-50, wherein the bridge's software to operate is updated); and communicating with the switch using the VLAN configuration information in subsequent communications (see col. 14, lines 9-11, wherein a connection is formed between bridge 152 and router 150)

Varghese fails to disclose broadcasting a message at the repeater to the switch, the broadcasted message indicating that the repeater is entering the network, which is well known in the art and commonly adopted in communications field. Ichikawa from the same or similar fields of endeavor teaches broadcasting a message (fig. 14, communication startup request signal 18-1) at a repeater (fig. 14, wireless packet terminal 1-7) to the switch (fig. 14, wireless base station 1-6), the broadcasted message indicating that the repeater is entering the network (fig. 14, communication startup signal 18-1, communication will be started with the base station when the wireless packet terminal enters the network). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to incorporate the elements above stated by Ichikawa in the network of Varghese. The method taught by Ichikawa is modified/implemented into the network of Varghese by broadcasting message from the repeater to the switch. The motivation for broadcasting a message at the repeater to the switch, the broadcasted message indicating that the repeater is entering the network is to alert the switch and other members of the network that the repeater is entering the network simultaneously.

9. Claims 9, 10, 41-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over in view of Hong et al. in U.S. Patent No. 6,292,508 B1 (newly cited), hereinafter referred to as Hong.

For claim 9, Varghese discloses a method, comprising: periodically transmitting, at a switch (see fig. 5, bridge 152), a heartbeat message (see col. 13, lines 35-38, bridge periodically sends hello messages to router 150) to a network having one or more repeaters (see fig. 5, router 150), the heartbeat message including a VLAN ID identifying the switch (see col. 13, lines 38-40, wherein the hello messages contain the VLAN ID of the bridge); listening at a repeater to messages transmitted over the network for the heartbeat message identifying the switch (see col. 5, lines 41-44, wherein the two devices communicate through periodic hello messages); and in response to a response from a repeater (see col. 13, lines 44-46, wherein the router 150 responds with OnHello), transmitting VLAN configuration information to the repeater (see col. 14, lines 9-11, wherein the bridge 152 sends hellos after the link is turned ON).

Varghese fails to disclose the specific repeater being inactive previously, and then starting to operate after activation (although Varghese does disclose the repeater being inactive when it crashes), which is well known in the art and commonly adopted for fault recovery. Hong, from the similar field of endeavor, teaches the activation of inactive repeater node via power management and use of beacon message (see col. 18, lines 32-47, col. 19, lines 27-40, col. 20, lines 14-23). Thus, it would have been obvious to one of ordinary skill in the art to adopt the feature of activation of inactive repeater in Hong into the method of Varghese to provide device fault recovery to further enhance the system reliability.

For claim 10, Varghese discloses downloading operating software to the repeater to enable the repeater to operate (see col. 6, lines 48-50, wherein the bridge's software to operate is updated).

For claim 41, Varghese discloses one or more repeaters coupled to the switch (110 and 111 in Figure 2).

For claim 42, Varghese discloses a local memory (144) for storing VLAN ID.

For claim 43, Varghese in view of Hong discloses the response includes a second heartbeat message (hello message).

For claim 44, Varghese in view of Hong discloses the feature of listening to all messages regardless of VLAN types (see col. 5, lines 41-44, wherein the two devices communicate through periodic hello messages in Varghese).

For claim 45, Varghese in view of Hong discloses the feature of activating the inactive repeater by powering up the inactive repeater (see col. 18, lines 32-47 in Hong).

For claim 46, Varghese discloses that the VLAN configuration information including VLAN ID identifying each traffic criteria (see col. 13, lines 38-39, wherein the hellos contain VLAN ID and type of all VLANs known to the bridge 152).

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dobbins et al. '995 & '171, RiJHsinghani et al., Varghese et al. '236, Acharya '989 & '999, Meier and Shabtay et al. are additionally cited to show the common feature of communication network utilizing virtual local area network (VLAN) ID for data communication similar to the claimed invention.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alpus H. Hsu whose telephone number is (571)272-3146. The examiner can normally be reached on M-F (5:30-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay K. Patel can be reached on (571)272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AHH

/Alpus H. Hsu/
Primary Examiner, Art Unit 2465